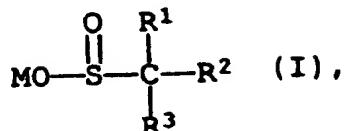


We claim:

1. A sulfinic acid compound of the formula (I)

TO 220



5

where

10

M is a hydrogen atom, an ammonium ion, a monovalent metal ion or an equivalent of a divalent metal ion of the groups Ia, IIa, IIb, IVa or VIIb of the Periodic Table of the Elements;

20

R¹ is OH or NR⁴R⁵, where R⁴ and R⁵ independently of one another are H or C₁-C₆-alkyl;

R² is H or an alkyl, alkenyl, cycloalkyl or aryl group, it being possible for these groups to have 1, 2 or 3 substituents which are chosen independently of one another from C₁-C₆-alkyl, OH, O-C₁-C₆-alkyl, halogen and CF₃; and

R³ is COOM, SO₃M, COR⁴, CONR⁴R⁵ or COOR⁴, where M, R⁴ and R⁵ are as defined above, or, if R² is aryl, which may be unsubstituted or substituted as defined above, is also H,

and the salt thereof.

25 2. A sulfinic acid compound as claimed in claim 1 of the formula (I),

where

30

M is an ammonium or alkali metal ion or an equivalent of an alkaline earth metal ion or zinc ion.

3. A sulfinic acid compound as claimed in claim 1 or 2 of the formula (I),

22

where

R¹ is OH or NH₂.

4. A sulfinic acid compound as claimed in claim 1 of
5 the formula (I),

where

R² is a hydrogen atom or an alkyl or aryl group
which may have one or two hydroxyl or alkoxy
substituents.

10 5. A sulfinic acid compound as claimed in claim 1 of
the formula (I),

where

15 R³ is COOM or COOR⁴, where M and R⁴ are as defined
in claim 1.

20 6. A sulfinic acid compound as claimed in claim 1 of
the formula (I),

where

25 M is an alkali metal ion or an equivalent of an
alkaline earth metal ion or zinc ion;

R¹ is OH or NH₂;

R² is H or alkyl; and

30 R³ is COOM or COOR⁴, M being as defined above and
R⁴ being H or C₁-C₆-alkyl.

7. A sulfinic acid compound as claimed in claim 4 of
the formula (I),

where

35 R² is aryl, which may have one or two hydroxyl
or alkoxy substituents; and

R³ is H.

8. A sulfinic acid compound as claimed in claim 7 of
35 the formula (I),

where

R² is hydroxyphenyl or C₁-C₄-alkoxyphenyl.

9. A sulfinic acid compound as claimed in claim 1 of
5 the formula (I),
where

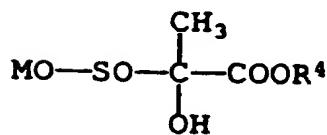
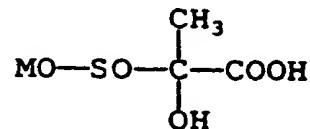
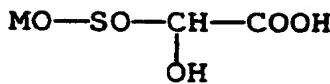
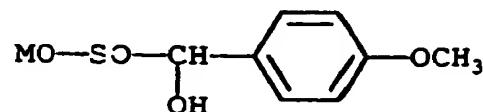
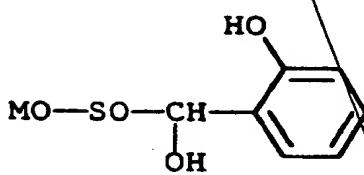
M is an alkali metal ion or an equivalent of an
alkaline earth metal ion or zinc ion;

R¹ is OH or NH₂;

10 R² is hydroxyphenyl or C₁-C₄-alkoxyphenyl; and

R³ is a hydrogen atom.

10. Compounds of the formulae (M = Na, K, Mg, Ca, Zn):



(R⁴ = CH₃, C₂H₅).

15

11. A mixture of a sulfinic acid compound as claimed
20 in one of claims 1 to 10 with the sulfonic acid
corresponding to the sulfinic acid compound or the
salt thereof and with or without the corresponding
sulfite.

12. A mixture as claimed in claim 11 having the following composition:

5 Compound of the formula (I) 20-99% by weight
 Sulfonic acid corresponding to
 the compound of formula (I) 0-60% by weight
 M_2SO_3 0-40% by weight

10 13. A mixture as claimed in claim 12 having the following composition:

15 2-Hydroxyphenylhydroxymethylsulfinic
 acid, sodium salt: 61-98% by weight
 2-Hydroxyphenylhydroxymethylsulfonic
 acid, sodium salt: 2-15% by weight
 Sodium sulfite: 0-37% by weight

20 14. A mixture as claimed in claim 12 having the following composition:

25 4-Methoxyphenylhydroxymethylsulfinic
 acid, sodium salt: 60-98% by weight
 4-Methoxyphenylhydroxymethylsulfonic
 acid, sodium salt: 2-15% by weight
 Sodium sulfite: 0-38% by weight

30 15. A mixture as claimed in claim 12 having the following composition:

35 2-Hydroxy-2-sulfinatoacetic acid,
 disodium salt: 40-73% by weight
 2-Hydroxy-2-sulfonatoacetic acid,
 disodium salt: 2-7% by weight
 Sodium sulfite 0-33% by weight

Water: 5-30% by weight

16. A mixture as claimed in claim 12 having the following composition:

5

2-Hydroxy-2-sulfinatoacetic acid,
zinc salt: 20-70% by weight

2-Hydroxy-2-sulfonatoacetic acid,
zinc salt: 5-60% by weight

10

water: 5-30% by weight

17. A mixture as claimed in claim 12 having the following composition:

15

2-Hydroxy-2-sulfinatopropionic acid,
disodium salt: 38-70% by weight

2-Hydroxy-2-sulfonatopropionic acid,
disodium salt: 5-30% by weight

20

Sodium sulfite: 0-33% by weight

Water: 5-30% by weight

18. A mixture as claimed in claim 12 having the following composition:

25

Ethyl 2-hydroxy-2-sulfinatopropionate,
sodium salt: 60-80% by weight

Ethyl 2-hydroxy-2-sulfonatopropionate,
sodium salt: 0-5% by weight

Sodium sulfite: 0-5% by weight

30

Water: 5-20% by weight.

19. A composition comprising at least one sulfinic acid compound as claimed in one of claims 1-10 or at least one mixture as claimed in one of claims 11-18, together with customary additives and auxiliaries.

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20. The use of the sulfinic acid compound as claimed in one of claims 1-10 as reducing agent.

5 21. The use as claimed in claim 20 as cocatalyst in emulsion polymerization or redox catalyst system in plastics production.

10 22. The use as claimed in claim 20 as reducing agent component for textile printing, in textile bleaching or vat dyeing or as reducing bleach for mineral refining or fiber finishing.

A handwritten signature, appearing to read "Addy", is written over a large, roughly triangular redaction mark that covers the bottom portion of the list of claims.